1983:202934 HCAPLUS 98:202934 DN ΤI Copper alloys as lead-frame materials of semiconductor devices PA Sumitomo Electric Industries, Ltd., Japan so Jpn. Tokkyo Koho, 4 pp. CODEN: JAXXAD DTPatent LΑ Japanese FAN.CNT 1 PATENT NO. KIND DATE APPLICATION NO. DATE \_\_\_\_\_\_ ΡI JP 57056215 B4 19821129 JP 1977-4007 19770119 PRAI JP 1977-4007 19770119 Cu alloys contg. 0.02-0.3% Ag and 0.03-0.3% Sn(with Ag + Sn 0.1-0.5%) are used as packaged lead-frame materials for semiconductor devices. Thus, cast ingot (140 .times. 140 .times. 2000 mm) of Cu alloy [ 85759-48-4 ] contg. 0.11  $s_n$  and 0.15%  $A_g$  was hot-rolled to a 8 mm thick plate, cold-rolled, internally softened, and cold-rolled to sheet 0.6 mm thick. The sheet was annealed 3 h at 420.degree., and temper-rolled to 0.4 mm thickness. This sheet had thermal expansion coeff. 1.77 .times. 10-5/degree, tensile strength 36.5 kg/mm2, and elec. cond. 89% of International Annealed Cu Std.